

# NOAA FY 2000 Budget Request Fact Sheet (YEAR OF THE OCEAN INITIATIVE



# **Exploring the Last U.S. Frontier**

NOAA requests an increase of \$4.1 million in FY2000 to unravel deep sea mysteries, discover new opportunities in our oceans, and better understand how to protect our irreplaceable marine resources. NOAA will develop new capabilities and technologies for undersea exploration, partner with the National Geographic Society to explore life in America's marine sanctuaries through the "Sustainable Seas Expedition," and assess the relative contribution of ocean resources and activities to our economy. NOAA's Exploring the Last US Frontier request helps fulfill a key pledge made by the President at the National Ocean Conference in 1998, and complements other Year of the Ocean initiatives seeking to explore, protect and restore America's vital ocean resources.

NOAA Budget	FY 2000
110121200000	Change
	\$M
National Ocean Service (OR&F)	
Navigation Services	
(Ports for the 21st Century)	\$5.2
Ocean Resources Conservation & Assessment	
(Exploring the Last Frontier)	\$1.0
(Coral Reef Protection)	\$2.0
National Marine Fisheries Service (OR&F)	
Conservation and Management Operations	
(Magnuson-Stevens Act)	\$2.6
(Observers)	\$2.0
Information Collection and Analysis	
(Fisheries Oceanography)	\$1.6
(Aquaculture)	\$1.0
Oceanic & Atmospheric Research (OR&F)	
Climate and Air Quality Research	
(Ocean Climate Variability)	\$4.0
Oceans and Great Lakes	
(Aquaculture)	\$3.6
(Fisheries Oceanography)	\$0.4
(Ocean Observatories)	\$3.1
Procurement, Acquisition, & Construction A	ccount
(Fisheries Research Vessels)	\$51.6
(Fisheries Research vessels)	\$31.0
NOAA Year of the Ocean Initiative Total	\$78.1



"Deepworker 2000" submersible will be used to explore National Marine Sanctuaries for the Sustainable Seas Expedition.

## Why Our Oceans Are a Mystery Worth Solving

While oceans cover most of the Earth, only 5% of the ocean and the sea floor have been explored. Until recently we knew more about the surface of the moon than the ocean floor. Recent explorations of deep-sea vents and other areas have revealed new life forms and scientific discoveries never before imagined.

In order to protect the oceans and its diverse resources for future generations, we must know more about them, and how human activities affect them. Advanced technology now allows researchers to explore and study these vast unknown resources. Information gleaned from the sea can also help identify vital new resources, such as new sources of minerals and life-saving pharmaceuticals. Exploration and research will also provide a clearer picture of the oceans and our coastal regions enormous contribution to our economy.

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In addition, as the National Marine Sanctuary Program grows, there is a critical need to evaluate other coastal and marine areas for possible designation as Sanctuaries. The assessment and analysis of existing information on areas containing valuable resources that may be in need of protection can be greatly enhanced by the exploration, observation, data collection and monitoring techniques fostered through this investment.

### Rising to the Challenge

NOAA is responding to this daunting challenge by developing the technologies needed to investigate the ocean depths, launching public-private partnership expeditions to explore our National Marine Sanctuaries, and conducting the research needed to assess the economic value of the domestic ocean and coastal resources. These efforts will lead to a better understanding and therefore better management and protection of our ocean and coastal resources. These efforts are described as follows:

#### 1. Ocean Observatories

The funding will enable NOAA to greatly expand its capabilities to conduct undersea research in coastal and deep sea regions through the development of seafloor observatories. Advanced technology plays a critical role with respect to our exploration capabilities and efforts. One of these emerging technologies is sea floor observatories. The funds will allow for the planning and preliminary development of two new unmanned deep-sea observatories one on the Juan de Fuca Ridge off the West Coast and one in the Gulf of Mexico for monitoring ocean phenomena including unusual life forms. The funds will also enable NOAA to expand two existing shallow-water observatories, the Leo - off of the coast of New Jersey and the Aquarius in the Florida Keys. In addition NOAA will develop, in partnership with industry, two state-of-the-art submersibles that will be used by the government and the scientific community to explore undersea areas never before seen by man. Technology enhancements will build on the capabilities of these systems by extending their utility in gathering real-time information and conducting long-term studies.

#### 2. Sustainable Seas Expedition

In the Spring of 1998, NOAA embarked on a five-year Sustainable Seas Expeditions (SSE) project in partnership with the National Geographic Society, and supported by the Richard and Rhoda Goldman Fund. The SSE project uses state-of-the-art, one-person submersibles and other deep water exploration technologies to explore undersea life in NOAA's National Marine Sanctuaries. Diving up to depths of 2,000 feet, and using our Nation's 12 Sanctuaries as laboratories, will help establish the utility of new submersible technologies to enhance natural and cultural resource conservation. The technologies developed and refined for the SSE project will also provide NOAA with a crucial mecha-

nism for identifying and prioritizing ocean and coastal areas that could benefit the most from increased protection. NOAA will also use the funds to conduct research and science directed at gaining a better understanding of the contribution of ocean resources and activities to the Nation's economy and the impacts of human activities on marine resources. A comprehensive understanding of this complex relationship is essential for effective management and protection of our marine resources.



ROV Kraken with the National Undersea Research Program, New England Center.

#### **NOAA's Role**

NOAA is the lead federal agency for ocean exploration and coastal stewardship. NOAA's National Undersea Research Program (NURP) is dedicated to placing scientists underwater, either directly, through the use of submersibles, underwater laboratories, and diving, or indirectly by using remotely operated vehicles (ROVs) and autonomous undersea vehicles (AUVs) and observatories. They have a proven record of delivering the expertise that allows acquisition of otherwise unobtainable observations and samples.

NOAA also has over twenty-five years of experience in the management and protection of significant ocean and coastal resources through its National Marine Sanctuary program. The Sanctuary program uses NOAA's comprehensive research and science capabilities to identify and select innovative and effective management practices.

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